

Industrial Standardization

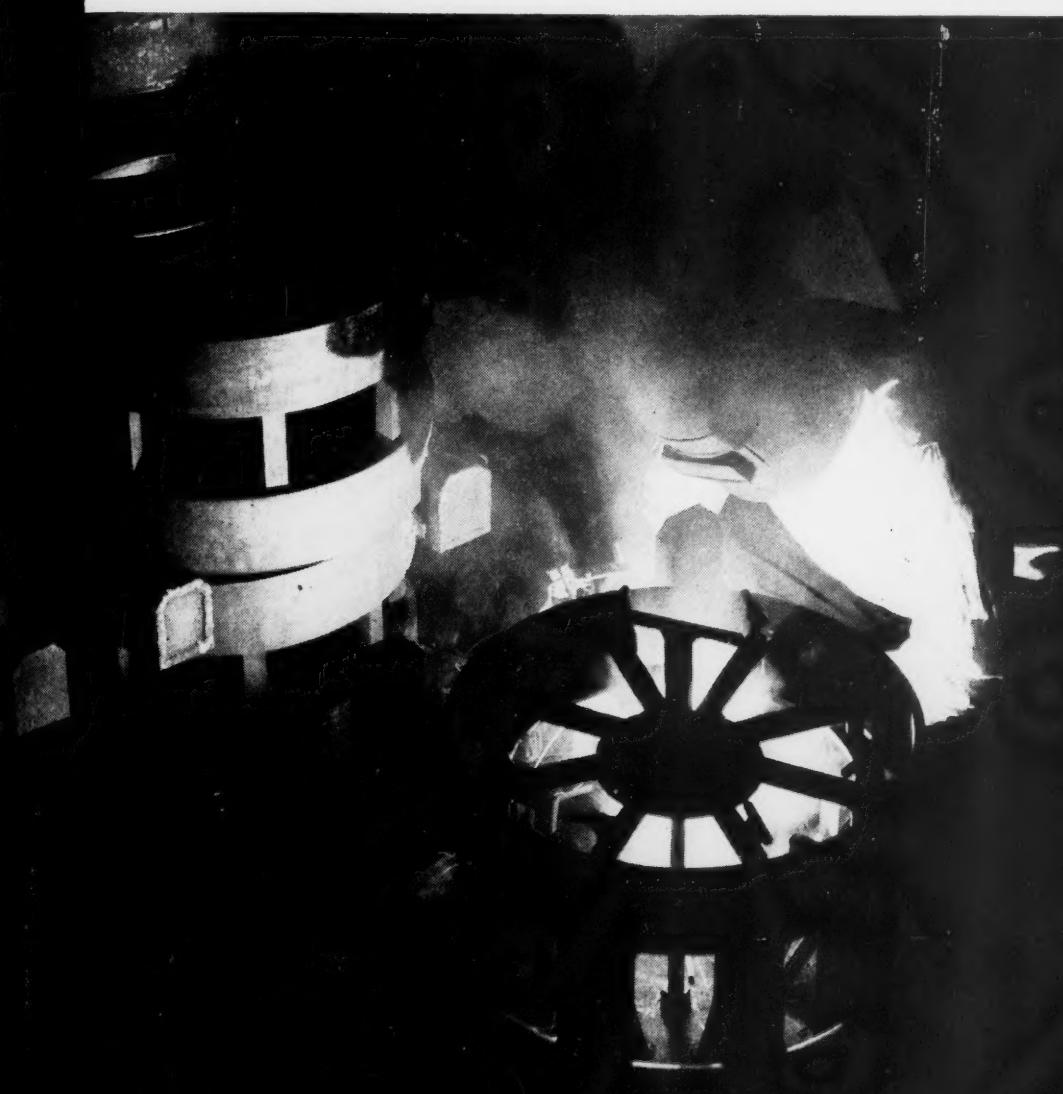
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June

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Experts Submit Safety Code Covering Portable Grandstands

Three Years Work Ends in Report to Committee

Unusual Methods Pursued in Obtaining Construction Data and Maintenance Rules

THE many organizations that have been requesting adequate specifications covering the construction and use of portable grandstands may soon have such a group of specifications if the recommendations that have been made to the Committee for the Safety Code for Grandstands by its subcommittee on portable stands are accepted.

After nearly three years of intensive effort the subcommittee has completed a draft of a standard for the construction, maintenance, and use of portable steel and wood grandstands.

This committee worked under the chairmanship of S. W. Homan, Department of Labor and Industry, Harrisburg, Pa., and was composed of

C. H. Wetzel, Wayne Iron Works, Wayne, Pa.,
C. J. Raider, United States Fidelity and Guarantee Corporation, Baltimore,

Charles R. Weeks, Department of Labor, Trenton, and

Arthur Upson, National Lumber Manufacturers Association.

It started from scratch to develop this standard. No group of specifications had been previously developed. All that existed was some bibliography composed chiefly of the personal points of view of individual consulting engineers and architects.

This does not mean, however, that the standard which the committee has recommended for approval merely represents the collective point of view of five individuals who happened to be brought together to study the problem. In order to insure the practicability of the recommendations, the standard has been developed under a procedure that is probably unique.

State Asks for Code

The safety code for grandstands was initiated at the request of the Pennsylvania Department of Labor and Industry which under the provisions of a law covering protection from fire and panic was called upon to inspect practically all grandstands erected in the state and to prescribe rules

and regulations governing the erection and use of this type of equipment.

At the time of the organization of the ASA committee, the Pennsylvania Department had prepared a tentative draft of a group of rules and regulations covering the construction, installation, and use of grandstands. This draft was discussed in public hearings held throughout the state.

The draft standard, together with the comments and criticisms received was turned over to the subcommittee on portable steel and wood stands which the Pennsylvania Department decided to use as its technical advisory committee.

The committee soon decided that it did not have sufficient technical information, particularly in reference to the horizontal forces produced by movements of the occupants of a grandstand. The Pennsylvania Department of Labor and Industry and the ASA subcommittee arranged for tests to determine just what these horizontal forces are.

Test Apparatus Is Built

The Wayne Iron Works of Wayne, Pa., arranged for the construction and setting up of test apparatus at their plant and tests were conducted by the committee and a number of invited guests interested in the subject. A full report of the tests was published in the April, 1932, issue of the ASA Bulletin.

With the technical data derived from the tests as a background, the committee prepared a draft of a standard which was circulated for comment and criticism. The Pennsylvania Department of Labor and Industry also submitted the draft to public hearings held throughout the state. All the comments were collected and studied by the committee and a new draft prepared which was adopted by the Pennsylvania Department as the official regulations for that state.

The practical application of the standard

Death and Destruction Lurk In Poorly Built Grandstands



Acme and International News photos

Structural defects were given as the cause of the collapse of this grandstand, Baker's Field, Philadelphia (above). Police removing a fatally injured man from the wreckage of a crashed grandstand at the Tournament of Roses, Pasadena (lower right).

through the enforcement procedure of the state inspection system furnished a laboratory in which it was possible for the ASA committee to study the practicability and reasonableness of the requirements. Much valuable information was collected through the state inspection work. This showed that some changes in the standard were necessary, but the state department decided to use

Hundreds of thousands of dollars in personal injury awards have been paid because of failures of grandstands. These specifications for Construction and Maintenance of Temporary Grandstands mark the first move to end these disasters.

the ASA committee as its advisory committee in the preparation of these changes.

Then, too, some manufacturers of equipment which were having difficulty in having their particular designs of equipment approved suggested some changes in the specifications. From these two sources the committee was able to make such changes in the draft as to remove the problems of

enforcement as experienced in the state and to avoid contentions of manufacturers of equipment. This revised draft has been adopted by the State of Pennsylvania as the official requirements of that state and the subcommittee has submitted the draft as its report to the main sectional committee for approval.

Cooperation Is Effective

The cooperative relationship which has existed between the ASA committee and the Pennsylvania Department of Labor and Industry is unique in the development of American Standard safety codes. The opportunity to use the state machinery in this way has undoubtedly brought about a more technically sound and practical group of specifications than would otherwise have been the case.

As has already been stated the report of the subcommittee on portable steel and wood grandstands is now before the main sectional committee for consideration. All the national groups cooperating in the development of this standard now have the opportunity of giving it thorough consideration and of recording their approval or disapproval. If necessary, a meeting of the sectional committee will be held to consider any technical criticisms presented but the thoroughness with which the subcommittee has functioned indicates that the standard will be acted upon by the sectional committee with reasonable dispatch and thereby make available to those organizations that have requested standards for grandstands, specifications which they can use in the purchase of such equipment.

Railroad Places Car Order Based on Standard Design

A particularly timely recognition of the merits of the American Railway Association's standard steel box car is afforded by the action of the Chicago Great Western in ordering 500 cars of this design from the Pullman Car & Manufacturing Corporation. This is the largest order yet placed for steel-sheathed box cars built to specifications which were adopted as standard by the A.R.A. in 1932.

According to P. H. Joyce, president of the road, the new cars are of "the latest improved type," weighing 3,500 to 4,000 lb less than older type cars which they will replace. The addition of these cars to the Chicago Great Western inventory is part of a broad program to improve equipment conditions on this road by replacing obsolete cars, particularly those with arch-bar trucks, which are scheduled for retirement by the end of 1935 in the interests of safety and reduced maintenance cost.

The present A.R.A. standard box car is quite generally conceded to be the best balanced design yet developed, representing the combined experience of the Committee on Car Construction of the A.R.A., Mechanical Division, and a committee representing the American Railway Car Institute. The design was developed with the announced object of producing a car adapted to modern operating conditions and embodying an efficient use and distribution of materials which would permit making a substantial saving in weight without loss of strength or dependability.

In other words, the car design was adopted as "representing the latest state of the art in reference to weight, cost, construction, strength, distribution, and utilization of the materials employed and general utility, so that, when completed, the car would be too attractive for railroads to disregard and would be of such character that any road might properly and consistently adopt the design as standard and construct there-to its future equipment of this type."

That the principal objectives in the design of the A.R.A. standard box car have been attained seems to be amply demonstrated by the results of recently completed tests in which the performance of two of five sample cars, built for the A.R.A. to this design, is compared with the performance of cars of the Railroad Administration design developed in 1919 and the tentative A.R.A. design of 1923.

In these tests, which constituted engineering research of the highest order, the extensometer and deflectometer method of measuring car reactions under various load conditions was used and showed the marked superiority of the standard car in that excessive local stresses were avoided and a uniformly low distribution of stress was secured in the car body structure, in spite of the lighter construction.

Severe impact tests of the three designs of box cars were made under full axle loading and at speeds up to 18.3 mph, the standard car showing no weaknesses in design or indications of distress or distortion.—*Railway Age*, May 26, 1934.

Advertisers Ask for Fewer Page Sizes

The development of a Simplified Practice Recommendation for cover and page sizes of catalogs, booklets, and house magazines is being undertaken by the National Bureau of Standards in collaboration with the Standing Committee in charge of Simplified Practice Recommendation R22-33, Paper (Basic Sheet Sizes). This project resulted from a request made to the Bureau by the Advertising Federation of America.

Standardization of Speeds of Machinery¹

by

R. Germar²

THE application to high-grade machine tools of the provisions of the proposed German national standard "Recommended Values for Idling Speeds of Machine Tools and Gear Drives,"³ with its six standard speed ratios—1.06, 1.12, 1.26, 1.41, 1.58, and 2.0—and the six standard series of speeds each progressing geometrically on the basis of one of these ratios,⁴ is now clearly understood in Germany. Based on the mathematically sound principle of the law of decimal-geometric progression (preferred numbers), the standard answers the requirements of individual electric drive (synchronous speeds of three-phase motors, pole changing), as well as those of power transmission drives (speeds under load and pulley diameters). Moreover, it conforms to the speed intervals that so far have been used most frequently in machine-tool construction.

The establishment of definite standard speed series had its effect on theoretical and practical design. To the user it afforded a clear view of the working range of the machine equipment and its performance capacity, as well as a maximum simplification of the process of computation; to the manufacturer it meant—after the difficulties inherent to its introduction had been overcome—the simplification of design and manufacture, and therefore a decrease in the mental and manual work required for constructing the machine.

As a result of speed standardization, only a limited number of transmission ratios (also increasing in a geometric ratio), and a definite number of teeth most favorable for attaining these have to be considered. Moreover, in the case of a number of gear drives which are very difficult to compute but are especially advantageous in practical use, the application of speed standardization has shown that only part of these appear to be of practical importance. They have been arranged in readily intelligible tables from which the designer can pick, without making any com-

¹ Translated by I. Gutmann, associate editor, *Engineering Index*, from an abstract of a paper by Dr. Germar published in *Maschinenbau der Betrieb*, April, 1933.

² Berlin, Germany.

³ Proposal DIN 860.

⁴ G. Schlesinger, *Wesen und Auswirkung der Drehzahl-normung*. AWF-Heft 239, RKW Nr. 66. Berlin, 1931.

putation,⁵ the gear drives answering his purpose. In this respect, he may receive practical help from the so-called speed diagram, which is a new kind of graphic presentation of all speeds and transmission ratios permitting ready visualization and judgment of all characteristics of the gear drives.

The computation of the proper speeds and tooth numbers has thus become considerably simpler. It is now possible to obtain gear drives with the highest speed ratios accurate to within ± 2 per cent. Of the three factors upon which the accuracy of the series of speeds of a gear drive depends—drop in speed of electric motors under load; slip of the belt; and the fact that an integral number of gear teeth must be used—the last two can now be definitely stated and controlled, and it seems fair to expect that complete clarity will also soon be attained with reference to the speed drop in electric motors.

The approved and projected speed standards of foreign countries, particularly of France (CNM 113) and of the United States,⁶ make use of the same geometrical steps, although the French use only 1.26 and by exception also 1.58. However, they do not have the same basis for their speed series, since the initial numbers are different. The resulting difficulty can easily be eliminated, as proposed by G. Schlesinger, by the use of a counter-shaft somewhere in the gear drive.

Speed standardization has also exerted a very beneficial influence on the study of the problem of preferred numbers, properly speaking. Last year at the International Standards Association conference in Milan, complete agreement on the values of numbers for the decimal-geometric series was reached between Germany and France. In this agreement some of the other metric countries of Europe have already joined, while others intend to do so. The principle of preferred numbers is also gaining ground in non-metric countries, particularly in America, where it has been most critically examined, particularly as to its usefulness in establishing an economic series of types,⁷ by R. E. Hellmund, chief engineer of the Westinghouse Electric & Manufacturing Company, and has been recognized as sound.

⁵ R. Germar, *Die Getriebe fuer Normdrehzahlen, neue Rechnungswege und Hilfstafeln fuer den Konstrukteur*. Berlin, 1932.

⁶ J. Decker, "Geometric progression in machine-tool speeds," *American Machinist*, London, 1931.

⁷ R. E. Hellmund, "Fundamentals of standardization as related to preferred numbers," *Production Engineering*.

Standards for Consumer Goods¹

by

P. G. Agnew,

Secretary, American Standards Association.

IN THE past few years there has been an increasing demand for the use of technical specifications to insure the quality of goods sold across the counter. The inspiration of this far-reaching movement has come from the extensive and successful use of technical specifications by industry to control the quality of goods used by manufacturers.²

The work of the National Recovery Administration, and particularly its Consumers' Advisory Board, has been the principal factor in bringing this subject so rapidly to the fore in recent months. In fact the NRA has done more than any other movement to bring home to industry and to the general public the importance of quality control in the buying and selling of commodities. There has come to be a widespread understanding of the fact that most of the "chiseling" throughout the whole field of distribution, both of consumer goods and of producer goods, is based on some form of misrepresentation or at least misinformation in regard to quality. For example, one of the most experienced executives in the steel industry has stated the situation substantially as follows:

In tracing these difficulties to their sources, we find that "chiseling" on quality is more frequent and more important in its disruptive influence than is "chiseling" on price. In other words, executives are finding that to know exactly what it is we are selling is just as important as is the price. This means that standardization has become a tool of major importance both in the control of operations and sales policies and in the elimination of abuses.

Advocates of consumer standards believe that

"Economic Illiteracy" Of Ultimate Consumers

Twenty-three articles in the May issue of *The Annals of the American Academy of Political and Social Science* are devoted to the "economic illiteracy" of the ultimate consumer.

One of the articles, by Dr. Agnew, states the question and summarizes the main features of the movement for standards for consumer goods. It is given here in abstract.

the extensive use of specifications and labeling in retailing goods to consumers would give the man in the street greater control in his purchasing, and they contend further that such a development would raise the standard of living of the entire population.

There is nothing accidental about this sudden increase of interest in standards for consumer goods under the operation of the NRA and the Agricultural Adjustment Administration. A part of the philosophy underlying the New Deal is a change in the chief emphasis of our national life from production to consumption. One might almost say that, according to this philosophy, heretofore the chief "end of man" has been to serve as an individual unit in producing and distributing goods. The new principle holds that output and distribution both should be subordinated to the consumption and use of things, in order that every one may lead the good life.

Discussions Are Confused

There has been much confusion in the recent discussions, not only as to the aims, the techniques, the advantages, and the difficulties of such a program, but even as to what is meant by standards for consumer goods. To mention briefly some explicit examples:

Under the inspection control of the Department of Agriculture, one group of creameries has sold more than 800,000,000 pounds of butter in cartons bearing a printed certification that the contents had scored 93 or better.

The words "Choice Steer" are stamped on beef

¹ Abstract from *The Annals of the American Academy of Political and Social Science*, May, 1934.

² The reader interested in comparing the use of standards in industry with their use for consumer goods may consult *Industrial Standardization*, National Industrial Conference Board, 1929, or "Standards in Industry," *The Annals*, Vol. 137, May, 1928.

of that grade so that the housewife may check quality over the counter of the retail butcher.

Even the five-and-ten-cent stores now sell electric heater cord with quality grade marking in the form of inspection tags attached to every five feet of length.

Three-fourths of all gas-burning appliances are now sold under a label showing that the product complies with nationally recognized specifications.

Advocates of consumer standards believe that this technique can and should be extended to the majority of things purchased by individuals. Foods, furniture, clothing and other textiles, kitchen equipment and other household goods, they believe, should comply with easily understood and nationally accepted standards of quality, durability, and so forth.

Consider men's shirts—their wearing qualities, the shrinkage factor, and color fastness. When anything goes wrong with the shirt, the manufacturer, the retailer, and the laundryman each blames the other two—or the consumer.

Suppose that manufacturers of textiles, shirt makers, haberdashers, laundrymen, and the various interested technical groups should get together and agree upon a reference method of laundering as a national standard, which would thus represent good commercial practice in laundering. (The technical data necessary for this are available, and different group standards have been set up.)

Shirts by "Trips"

Once such a nationally recognized reference method should become established, the next step would follow simply and logically. Specifications could be established on the standard laundering method, and any manufacturer would be in a position to guarantee his shirts as complying with specifications for a "twenty-trip," "thirty-trip," or "forty-trip" shirt, meaning that the shirt when put through a standard laundry test this number of times would not (1) shrink more than the proper limit; (2) wear through or fray; or (3) fade beyond a certain tolerance. Would not a host of shirt buyers, harassed by the vagaries of the present non-specification shirt, become grateful customers of such a manufacturer?

Women's silk stockings account for four or five hundred million dollars of our national expenditure and constitute a major item of expense in women's clothing. Why should not a national standard test be set up to simulate stretching and abrasion in wear and laundering, upon the basis of which wearing qualities could be specified and graded? The benefits could then be brought to the individual customer through a system of labeling in just the same way that corporations buy their materials.

The most discussed proposal at the moment is the Lynd Report of the Consumers' Advisory Board.³ This proposes that there shall be set up wholly within the Federal Government a board to develop and promulgate standards for all types of products sold to the ultimate consumer.

An interesting feature of the Lynd plan is the provision for technical research and testing to establish the necessary technical basis for writing sound specifications. For this it is proposed that not less than \$250,000 be made available for such research and testing at the Bureau of Standards and other laboratories equipped to make competent tests, both in and out of the Federal service.⁴

Standardization Is Important Function

The Consumers' Advisory Board now regards standardization as one of its major questions and has been trying to secure the use of standards, or at least the official recognition of the need of them, in all the NRA codes.

A similar organization in the AAA, known as the Consumers' Counsel, is carrying on comparable activities to the same end, but limited to the field of agricultural products. There has been considerable coöperation between these two bodies.

Consumers, manufacturers, distributors, the advertising fraternity, and publishers are the groups principally concerned with the subject of consumer standards.

Consumers.—The vast majority of consumers are unorganized and are, of course, unaware of the problem. Nevertheless, it seems certain that at least some hundreds of thousands of men and women have read something about consumer standards proposals, even if they have gone no deeper than newspaper headlines.

In recent years American consumers have become increasingly critical of advertising. The fact that a new magazine containing nothing but lampoons and ridicule of nationally known advertisements gained a phenomenal circulation with its first issues would seem to be enough to convince even the most conservative of the desirability of open-mindedness in regard to the introduction into the marketing process of basically new factors. Discussions about the Tugwell bill and other

³ INDUSTRIAL STANDARDIZATION AND COMMERCIAL STANDARDS MONTHLY, January, 1934.

⁴ It is universally recognized that the Consumers' Advisory Board is a much weaker organization than is either the Industrial Advisory Board or the Labor Advisory Board. This unquestionably results from the slight extent to which consumers are effectively organized and active. Consumers' Advisory Board members were appointed as individuals. Only a few consumer groups are represented in its personnel, and there is no representation of the viewpoints of the two most experienced and technically best equipped consumer bodies. A considerable part of the personnel has been drawn from universities.

movements calculated to serve the ultimate consumer are doing a great deal to familiarize the public with the concept of standards and the use of labels to enforce them.

A militant left-wing group, including Consumers' Research and a group of co-operatives, demands a most aggressive policy on the part of the Government. Some have gone so far as to urge the organization of a "Department of the Consumer" headed by a secretary with a place in the Cabinet.

A "center" group includes the American Home Economics Association, the General Federation of Women's Clubs, the League of Women Voters, and the American Association of University Women. All of these and a number of similar organizations seem to favor compulsory labeling of goods bought over the counter. During the past weeks they all battled for the inclusion in the NRA codes of mandatory grade labeling of canned foods.

Manufacturers.—Most manufacturers are almost wholly uninformed about the subject, notwithstanding the successful experience of several industries which have adopted this practice of grade marking in accordance with specifications. Perhaps their attitude may be fairly summarized by saying that in so far as they are aware of the movement they see it simply as a feeble and ill-advised attack upon the institution of trade brands.

Because trade brands and the tremendous volume of advertising based upon them constitute the very citadel of modern merchandising, the attitude is that the movement for consumer standards is to be ignored if possible; but if it cannot be ignored, it must be fought.

On the other hand, there are many exceptions to this rather sweeping statement. Not only are some groups making successful use of some phases of standardization for consumer goods in their marketing operations, but other groups and individual companies are giving serious study to the whole subject.

Advertisers and publishers.—The attitude of the advertising profession and of publishers interested in consumer goods seems to be similar to that of the manufacturers. It seems strange that a profession which has introduced such revolutionary factors into business as has advertising, should attempt to dispose of this movement without serious study of it. Yet in discussions and controversies on the subject I do not yet know of a contribution from the advertising or publishing profession which shows the results of any real analysis of the subject or which does otherwise than condemn the movement out of hand, the inference being that the consumer standards movement consists of nothing but an attack upon trade brands and national advertising.

Railroad Crossties And Standardization

Studies of the life of railroad ties led to the development of standard specifications for the manufacture of ties and timber for all classes of railroad work. These specifications enable a manufacturer to so grade his products as to bring him a greater return, and assures a railroad of a more careful selection of materials. It increases the tie producers' profits and at the same time reduces the cost of maintenance of way and upkeep of railroads.—*John V. Neubert, chief engineer, maintenance of way, New York Central Lines in "Railway Age," May 26, 1934.*

Distributors.—There is considerable difference in the attitudes of the various distributor groups. With few exceptions, such as the retail hardware dealers, the independent retail stores are not yet interested in the movement. This seems to be largely the case also with the chain stores, with important exceptions with regard to certain lines of foodstuffs, such as grade-marked meat, eggs, and butter. In these the standards of the Department of Agriculture are followed.

Some large department stores are making considerable use of the specification principle in their own purchases, utilizing testing laboratories or even having laboratories of their own. To them, specifications have become useful tools in the conduct of their own business.

The National Retail Dry Goods Association itself has laboratory connections, but it has no committee on standards, nor has it any other regular means for developing or utilizing retail store opinion on the subject.

The large mail order houses have made more use of technical standards and are closer to the subject than any other distributor group. The larger houses have maintained laboratories for years. They have begun to make references to standard specifications in their catalogues, and through their publicizing of this idea are paving the way for increased use of this device. To date, the Mail Order Association has taken no official position on the subject.

Do specifications for consumer goods constitute a technique of better service to the consumer, giving him greater and easily used control, and also greater economy, and, equally important, to which he will respond by actual use? If so, they are bound to come into general use, for these functions are ends in themselves, to which all other considerations become secondary.

Is it feasible for the technique of quality specifications and labeling to be used effectively in conjunction with trade brands, or are the two ideas irreconcilable? This is the very crux of the whole problem. This question is at the bottom of all controversies and discussions on the subject, even though the fact may not always be recognized.

As has already been pointed out, most manufacturers and advertising specialists have assumed at the start that the two ideas are irreconcilable and have concluded that the whole specification idea is an attack on trade brands and national advertising. From present indications it would seem that the continuation of this attitude without any undertaking of fundamental study of the whole problem will almost inevitably lead to a long and intense struggle, which sooner or later will end in Congress in a battle for compulsory labeling under complete Governmental control.

Aid to Legitimate Advertising

On the other hand, it may be that serious and open-minded study of the entire subject by all the groups concerned will convince them that there is no essential conflict between the two ideas, and that the specification and labeling technique can be used as effective support for legitimate advertising and trade brands. It may also become an equally effective means of helping to "take the ballyhoo out of advertising"—an undertaking frequently discussed by the profession, but in which they have so far made extremely modest progress.

Coming back to the fundamental question, whether specifications and labeling can be used effectively in connection with trade brands and advertising, or whether the two ideas are irreconcilable, experience alone can give the final answer. Fortunately, a number of groups have had sufficient experience with specification and labeling technique to throw considerable light on the subject.

An analysis of the experience of some sixty groups in this field has been made by the American Standards Association, in which special attention was paid to undertakings that have been tried out on a national scale.⁵

Specifications Being Used

A considerable number of industries are using specifications on an extensive scale as a basis of labeling and grade marking. While reliable estimates were difficult to obtain, it is certain that

⁵ Agnew, P. G., and J. W. McNair, "Certification and Labeling Activities in 60 Commodity Fields," *ASA Bulletin*, Jan., 1932, pp. 1-23.

the value of products in which this technique is being used in connection with trade brands and national advertising totals many hundreds of millions or more. After years of experience, some of the groups are using the technique as a basis of their advertising.

Quality Is Not Stressed

Each of the cases studied illustrates a fundamental point, viz.: *only a minor part of today's advertising technique is concerned with quality and durability or with other characteristics which may be reduced to measurement in the form of a specification.* It seems to me that this has been entirely overlooked in the discussions on the subject, by both manufacturers and the advertising profession. May not a recognition of this vital point by manufacturers and advertisers change their present attitude toward the whole problem? Is it not possible that quality standards and labeling may contribute a new and vitalizing element to present-day advertising technique?

As a result of these and other considerations, the American Standards Association, following its study of the subject, adopted the following policy:

Any program of certification, labeling, or grade marking, in order to be adequate, should be based upon specifications which are publicly available and nationally recognized.

It is for the groups substantially concerned with the specifications to decide in each case whether there is to be certification or labeling.

Any certification or labeling program should be effectively supervised by a properly qualified body; e.g., a trade association, or a testing laboratory operating under proper administrative management.

Intimately connected with this problem is the serious handicap which we have in the hodge-podge of grade names and other designations, which are extremely confusing and misleading. These misleading grade designations, such as—to cite an actual case—the use of the word "medium" to designate the smallest size of a dried fruit, have unquestionably come about through the situation just described. They have been built up as a result of progressive overstatement in the competitive field—"chiseling on quality," to use the NRA term.

All the facts and considerations cited above lead to one conclusion, namely, that the proposal for the introduction into the merchandising process of the technique of specifications and labeling is of such importance that it calls for a most thoroughgoing investigation of the subject on the part of all the groups concerned—manufacturers, distributors, advertising agencies, and consumers—including a full and free interchange of data and opinions between groups.

President Asked to Establish Agency to Protect Consumers

Holding that consumers must have an independent Government agency to support the interests of the ultimate buyer if the country is to show a healthy recovery, 182 authors, editors, and writers presented a statement to President Roosevelt at the White House on April 29, asking that such a board be established.

The agency should, the statement said, be equipped with a consumers' standards laboratory, and a research staff, such as was recommended in the so-called Lynd Report.¹

The President showed a great deal of interest in the proposal, and expressed sympathy with the consumer point of view expressed, according to the committee. He discussed the subject for an hour with the spokesmen of the group.

The Introduction and Section III of the statement, the latter dealing with the consumer phase of the national recovery problem, follows:

"We believe that the acid test of the New Deal lies in its effect on the actual distribution of the wealth which the machine age creates but which we have yet to find the way to spread out and use. The depression dramatized both our success and our failure by its vast stocks of unpurchased goods and by its massed unemployment.

"For the rank and file of Americans this distribution of wealth comes down to work and earning power; and unless that is substantially increased, and made secure, recovery is bound to stall and Western democracy must acknowledge its incapacity to plan and control the economic forces on which modern life depends.

"We believe that higher wages, higher purchasing power, higher living standards can, short of government dictation, come only through the bargaining power of labor so well organized that it has an effective voice in determining working conditions. In the process of stimulating revival the NRA has made no determined effort, so far as we have observed, to bring unionization and collective bargaining to a point where the codes can be

enforced. If we are to find a democratic solution, things can no longer be allowed to drift.

"With wages lagging behind profits, and production already beginning to grow beyond the power of the wage-earning market to consume, the weakness of the NRA set-up (with its code authorities dominated by industrial interests) is registered in price practices which jeopardize the whole recovery program. Labor organization is weak in comparison with trade organization, but consumer organization is weaker or non-existent. The Consumers' Advisory Board is encased in a producers' scheme of control. We believe that just as in the case of the creation of the Labor Board, there is need for an independent, outside consumers' agency of government, which shall have an entirely free hand in standing for the consumers' stake in the flow of current wealth.

"It should be equipped with a consumers' standards laboratory and research staff such as has been recommended by the Consumers' Advisory Board. It should have a legal and educational staff which should inform and defend the consuming public. It should have powers of investigation and recommendation of legal action as unequivocal as those of the Federal Trade Commission, and should promote and serve organizations of consumers in the same way that the Department of Agriculture has looked out for the farmers."

Railroad Engineers Meet In Canada on Standards

Approximately 50 engineers representing the Committee on Standardization of the American Railway Engineering Association, the American Standards Association, and the Canadian Engineering Standards Association, met at Montreal, Quebec, on May 21, to discuss ways in which these three organizations could coöperate in the standardization of numerous details on which they are working individually.

The meeting, which was called by J. C. Irwin, chairman of the A.R.E.A. Committee, made progress in harmonizing activities of the groups.

¹ Industrial Standardization and Commercial Standards Monthly, Jan., 1934, p. 1.

Standards for Arc and Resistance Electrical Welding are Available

Copies of the recently approved American Standards for Electrical Arc Welding and Electrical Resistance Welding Apparatus (C52.1-1933 and C52.2-1933) are now available in printed form at 40 cents and 30 cents each, respectively.

These standards cover the general conditions upon which acceptance tests are based for the d-c generators, motor generator sets (including dyna-motors), a-c transformers and resistors used in electrical arc welding, and the transformers used to supply the current for the following types of resistance welding apparatus: (a) butt welding, (b) spot welding, (c) seam welding, (d) percussive welding.

These standards were developed by a sectional

committee under the joint sponsorship of the American Institute of Electrical Engineers and the National Electrical Manufacturers Association.

They constitute a revision of former A.I.E.E. standards on the same subjects. The committee which was in charge of the development of the standards was made up of representatives of five producers, six consumers, and eight general interests.

The standards are so framed as to insure, if they are followed in the manufacture of welding apparatus, that an adequate and properly controlled supply of electrical current will be provided to meet the exacting requirements of welding service.

proposed standards were recommended by the conferences for transmittal to producers, distributors, and users for written acceptances.

Manufacturers Ask Furnace Standard

Cooperation of the National Bureau of Standards in the establishment of a Commercial Standard for Warm Air Furnace Blowers and Air Conditioning Equipment, has been requested by the National Furnace Blower Manufacturers Association.

The scope of the project will probably cover minimum physical requirements for construction, capacity, gage and quality of materials, performance, freedom from noise, certification and labeling of power-driven warm air furnace blowers, air washing, conditioning and cooling equipment and accessory apparatus, including form of connections between the furnace intake and cold air return duct.

Rib Knitted Bathing Suit Standards Are Written

In response to an invitation distributed by the Division of Trade Standards of the National Bureau of Standards, general conferences were held in Philadelphia on May 25, to consider recommended commercial standards for rib knitted bathing suits and rib knitted sweaters. The proposed standards, providing measurements and tolerances for these garments, together with standard methods for obtaining these measurements, have been developed in co-operation with the National Knitted Outerwear Association.

At the conferences it was found that details of the documents, with the exception of the measurements for boys' bathing suits and boys' and girls' sweater coats, were fairly acceptable. The

Auto Equipment Standards Asked of National Bureau

The Fabric Auto Equipment Division of the Code Authority for the Light Sewing Industry (except garments) has requested the National Bureau of Standards for assistance in developing commercial standards for automobile seat covers, tire covers, side curtains, etc.

The project will cover fabric construction, finishing, shrinkage, stretching, stitching and sewing, dimensions, tolerances, strength, methods of test, and certification of the finished products.

Ophthalmic Lens Standards Asked

Requests have been received by the National Bureau of Standards from the Optical Industry Coördinating Committee of the Better Vision Institute for assistance in developing commercial standards for ophthalmic lenses. The project is intended to cover physical characteristics, methods of test, and certification of ophthalmic lenses.

Neville Company Joins ASA

The Neville Company, Pittsburgh, Pa., manufacturers of coal tar products, has become a Company Member of the American Standards Association.

Safety Glass Committee Formed, Specifications Group is Named

Technical Subcommittee, Representing All Interests, Appointed by Alfred Devine to Write Test Methods and Specifications for Safety Glass for Automotive Installation

AUTOMOBILE engineers, safety glass technologists, state highway administrators, representatives of the general public and insurance groups will write specifications, methods for test and performance requirements for safety glass. A technical subcommittee of this wide representation has been appointed by Alfred Devine, deputy registrar of motor vehicles, Massachusetts, who is chairman of the American Standards Association Safety Glass Committee.

When the Safety Glass Committee met in New York recently, it was pointed out that the confusing diversity of claims for safety made by motor vehicle and safety glass manufacturers on the one hand, and the present tendency of state legislatures regulating the use of safety glass in cars on the other, make speed in developing acceptable standards imperative.

The committee decided to concentrate its attention first upon the problem of safety glass used in motor vehicles before working on the problem of safety glass used for goggles and other industrial purposes. Later this subject, together with the use of safety glass for motor boats and aircraft will be taken up by another technical committee which will be appointed.

The automotive industry is the largest single user of plate glass in the United States. More than 40 per cent of all the polished plate glass manufactured in the country in 1933 was used in cars, buses, and trucks. It is by far the largest user of laminated plate glass.

The National Bureau of Casualty and Surety Underwriters and the National Bureau of Standards called for the organization of the Safety Glass Committee by the American Standards Association. Thirty-two technologists, insurance engineers, and other experts were present at the recent organization meeting.

It was brought out at this meeting that eight states now have legislation covering the use of safety glass in motor vehicles. Next January 44

state legislatures will convene and many of these bodies will be requested to pass laws on this subject. The specifications written by this committee will be of great assistance in drafting such laws and will be a guide to state motor vehicle administrators in their duties.

The terms "non-shatterable" and "non-scattering" were decried by several of the technologists present at the meeting because such generalities, it was pointed out, were misleading. The committee voted approval of this definition of safety glass:

"Safety Glass shall be construed as meaning glass designed to promote safety and to reduce or minimize the likelihood of personal injury from flying glass when the glass is broken."

The technical subcommittee proposes to take advantage of all of the research and technical work

Eight States Have Safety Glass Laws

States which have passed laws making the use of safety glass in automobiles mandatory are:

Iowa, Massachusetts, Michigan, Nebraska, New Jersey, New York, Pennsylvania, and Virginia. These states show about 35 per cent of the total motor vehicle registration.

In most of the 44 state legislatures, to convene next January, the question of such legislation or amplification to existing laws, will be raised.

Several states have written specifications for safety glass for use in motor vehicles.

Experts Appointed to Write Safety Glass Specifications

The technical subcommittee which will write specifications, methods of test, and performance requirements for safety glass will bring to the problem the points of view of glass and plastic makers; automobile, bus, and truck manufacturers; the motoring public; Government agencies; independent experts; and insurance interests.

The subcommittee, Z26.1, follows:

William F. Little, Electrical Testing Laboratories, Chairman.

A. F. Odell, duPont Viscoloid Company.

E. A. Wilson, Fiberoid Corporation.

R. A. Miller, Pittsburgh Plate Glass Company.

Mr. McCusker, Saftee Glass Company.

Martin Schreiber, Public Service Coordinated Transport.

H. C. Mougey, General Motors Corporation.

George L. McCain, Chrysler Corporation.

Burton W. Marsh, American Automobile Association.

Alfred Devine, Registry of Motor Vehicles, Massachusetts.

A. N. Finn, Chief, Glass Division, National Bureau of Standards.

Maxwell Halsey, National Bureau of Casualty and Surety Underwriters.

The committee elected Mr. Devine, who represents the Eastern Conference of Motor Vehicle Administrators, as chairman. A. N. Finn, National Bureau of Standards, was elected vice chairman and Maxwell Halsey, traffic engineer, National Bureau of Casualty and Surety Underwriters, was elected secretary.

Among the organizations represented at the meeting were: Aeronautical Chamber of Commerce of America, Inc.; American Ceramic Society (Glass Division); American Railway Association; American Society for Testing Materials; American Transit Association; Cellulose Plastics Manufacturers' Association; Eastern Conference of Motor Vehicle Administrators; Electrical Testing Laboratories; Underwriters' Laboratories, Inc.; National Bureau of Casualty and Surety Underwriters; National Society for the Prevention of Blindness; Safety Glass Association; Society of Automotive Engineers, and the National Bureau of Standards.

Groups invited, but which were unable to send representatives were American Automobile Association; American Motorists Association; Motor Truck Association of America; National Association of Engine and Boat Manufacturers; National Association of Motor Bus Operators; National Association of Mutual Casualty Companies; National Safety Council, and the U. S. Navy.

Standard Building Code Studies Begun in New York

The New York State Department of Labor, in collaboration with the Conference of Mayors and other Municipal Officials of the State, and the College of Engineering of New York University, is beginning a technical study of all building codes of the state for the purpose of unification and standardization and an ultimate recommendation to the Legislature for the adoption of a state standard building code.

The project, as described in a statement issued recently by William L. Picard, Deputy Commissioner of Labor of the State of New York, will be developed by engineers, architects, and statisticians under the CWA with offices in the School of Architecture of New York University.

Technical guidance for the project will be provided by five members of the New York University faculty, Dean Collins P. Bliss of the College of Engineering, Dean E. Raymond Bossange of the Department of Architecture, Professor Thorndike Saville, Professor Carl T. Schwarze, and Professor Walter S. Cleverdon, all outstanding in engineering and architectural circles. Frederick Pavlicek, Jr., will be in immediate charge of the project. Space for the project has been provided by Dean

done on safety glass by the glass manufacturers, makers of plastics used between sheets of plate glass in the laminated types, the National Bureau of Standards, automobile research laboratories, and independent engineering and scientific agencies in making its study of the subject.

Will Study All Types

Not only the laminated types will be considered, but also heat-treated glass and glass in which has been imbedded wire.

The subcommittee has been asked to submit a recommendation covering the types of safety glass to be required in various parts of automobiles. When safety glass was introduced as a part of standard equipment for cars, it was used chiefly in windshields. Now, many cars furnish safety glass throughout, but the practice in this regard is by no means standard.

Special consideration will be given to recommendations for the use of safety glass and the types of glass used in taxicabs and buses. Railroads, too, are interested in the use of safety glass. A representative of the American Transit Association pointed out that several important railroad companies own or operate bus lines.

Bossange at the University's Department of Architecture, 250 East 43rd Street.

The first part of the project will include an analytical review of the building codes of all of the principal cities in the state for the purpose of unification and standardization. Ultimately a state standard building code will be recommended to the New York State Legislature. The Department of Commerce, the National Housing Association, the American Standards Association and other authorities will be consulted in preparing the model standing building code.

Sponsors of the project believe that a standard code would have a material effect in reducing the cost of construction as well as encouraging new construction, and that the project has a marked economic value in strict accord with the National Recovery Act.—*American City, March, 1934.*

"National Bureau of Standards"

Secretary of Commerce Roper announced on April 27, 1934, that the name "National Bureau of Standards" will henceforth be used as the official designation of this Bureau.

The order restores the name of the Bureau as set forth in the original act passed by Congress March 3, 1901, which reads, "That the Office of Standard Weights and Measures shall hereafter be known as the National Bureau of Standards."

The use of the shorter title, "Bureau of Standards," has resulted in considerable confusion, because in recent years many of the State and municipal governments and several private organizations have established bureaus of standards. This confusion will be avoided by the use of the original legal designation.—*Technical News Bulletin, National Bureau of Standards, May, 1934.*

Truck Tire Simplification Recommendation Approved

Simplified Practice Recommendation R103-33, Industrial Truck and Trailer Tires, has been accorded the required degree of written approval by the industry, and became effective June 1, according to an announcement by the Division of Simplified Practice, National Bureau of Standards.

The original of this Simplified Practice Recommendation was formulated by the industry in 1929, and covered sizes of industrial truck tires only.

The current revision was proposed and developed by the industry's standing committee and includes stock sizes of industrial truck as well as trailer tires of the pressed-on type.

New York Legislation Seeks To Compensate for Silicosis

Silicosis, one of the deadliest and most insidious of industrial diseases, would be brought under the terms of the Workmen's Compensation Law by an amendment introduced in the New York State Legislature. The disease affects thousands of workers in the State to some degree and has no known cure.

The bill was a Department of Labor Measure, drafted after a series of conferences with insurance companies, employers, and labor, and represents an agreement in many respects.

In the past few months several hundred suits, asking for more than \$1,000,000 in damages, have been filed in the state courts. Employers and insurance companies, faced with the threat of court awards of many thousands of dollars to employees suffering from silicosis, are now behind the move to make it a compensable disease.

Because of the special and difficult nature of silicosis and its symptoms, the bill provides for the appointment by the Industrial Commissioner of three physicians with special experience and qualification in diagnosing silicosis to examine all persons claiming compensation for silicosis.

Silicosis increases susceptibility to other diseases, notably tuberculosis, and when complicated with them it is difficult to identify, except by specialists. It results from breathing in silica dust or silicon oxide. There is no known way to clear it up and restore normal lung tissue and breathing.

British Recommend Standard Cellulose Testing Methods

A subcommittee of the Fabrics Research Committee, London, has recently recommended a standard method of conducting viscosity tests for cellulose solutions and of expressing the results obtained. A report on the system proposed has been published by H. M. Stationery Office. In reviewing the work so far done, the report showed that there was no demand for a test of strict academic accuracy.

In industry, the first use made of viscosity measurement was as a control of the cellulosic raw material for nitration in the explosives industry. In textile manufacture, significance of the test was found in its close relationship with the tensile strength of the solid fibre.

In the pulp and paper industries, only the experimental stage of the use of the test had been reached, but interest was shown, as viscosity determinations afforded a convenient method of grading rags for strength.—*Chemical Markets, Mar. 1934.*

Program Seeks to Teach Consumer How to Buy

A program of consumer education in what it calls "Better Buymanship" has been inaugurated by the Household Finance Corporation. For several years the company has promoted budgeting and better management of household finances both among its customers and the general public. Recently Burr Blackburn, director of research, began advising on buying technique and offering monthly bulletins on "Better Buymanship" in two-minute talks during the company's half-hour broadcast. Each month the talks and bulletins specialize on some specific commodity, such as poultry and eggs, white goods, canned goods, stockings and shoes, silks and synthetic fibers, meats, etc.

Mr. Blackburn is a strong advocate of standardization and labeling of those qualities in commodities that can be measured. However, he does not advocate government enforcement of standards and labeling except to prevent fraud and misrepresentation and to protect public health. He thinks the government should develop standards and enforce them in goods using the government labels, but that the use of labels should be left to the discretion of manufacturers.

"Labels will be used," he says, "as soon as the public makes known that it wants them."

"I believe that when the consumers learn to use intelligently such measurements as are now available and to favor those products which are open and honest about the qualities of goods that can be graded, this will result in a more general adoption of standardizing on the part of manufacturers and merchants.

Help Consumer Judge

"For the present, with so little labeling being done, we are trying to help the consumer learn to judge quality himself, to substitute intelligent use of available information for confusion and skepticism.

"There is almost a consumer buying strike, due to the fact that the consumer has lost faith in price as an evidence of quality and has lost faith in the adjectives used in descriptions of advertised products.

"This confusion has been due to the fact that the consumer has been given enough information about quality and durability of goods to feel stung when goods sold to him as of high quality wear out quickly, shrink, or lose their color, or fail in many other ways to measure up to his expectations. He can only be brought out of this skepticism by general education which will enable him to have some standards of his own.

"The panicky arguments of brand advertisers against all standards or grading are amusing.

They go so far in insulting the consumer's intelligence that the reaction may be unfortunate bureaucratic enforcement of half-baked standards.

"Camouflage is rarely a lasting substitute for quality. Writing under the heading, 'Looking into the Consumer's Head,' in a current business men's magazine, Donald A. Laird, director of the psychological laboratory of Colgate University, lauded the sales adroitness of certain storekeepers who discovered they could sell 79 cent silk stockings 80 per cent faster by perfuming them.

"I don't believe Mr. Laird looked long enough. It undoubtedly did not occur to the merchants that they were hindering, not helping, their customers to determine quality and degree of satisfaction. No effort was made to tell the patrons how the stocking would wear.

"Honest manufacturers can expect relief from the unfair competition of inferior but price-camouflaged products. Thousands of honest and sincere merchandisers would welcome a change. The consumer's job will be to convince the merchant that we would rather 'talk business' than fall for the obsolete price gag, that we prefer simple information concerning quality rather than perfumed appeals to our ignorance."—*Advertising Age, March 17, 1934.*

Standards Increase Safety of Boilers

The art of boiler construction has been carried to a point at which, under proper operation and good inspection, there is little or no chance of an accident.

Indeed, the records of accidents to boilers in the past 10 or 15 years are positive evidence that latter-day standards have brought about a high degree of safety. Few, if any, accidents are due to structural weaknesses inherent in the design, workmanship, or material used. Also, the use of the factor of safety has contributed to the long life of boilers by delaying the approach to the danger point because of various deteriorating influences. —*Power, March, 1934.*

Canadians Are Writing Forgings Specifications

A draft specification for Heavy Steel Shaft Forgings is being prepared by the Canadian Engineering Standards Association committee on this subject. Companies represented on the committee agreed to accept steel purchased to such a specification. The number of tests will be kept as small as possible to avoid the extra cost involved, the committee decided.

Six Associations, Eight Companies Become ASA Members Since January

Since January, six associations have become Member-Bodies or Associate Members of the American Standards Association. Two, the National Electrical Manufacturers Association, and the Casualty Group of the American Mutual Alliance, have increased their memberships to make available the facilities and services of the ASA to all of their members.

During this period, eight companies have joined the Association, and four corporations have voluntarily increased their dues.

The American Petroleum Institute and the National Association of Master Plumbers of the United States are the new Member-Bodies.

Associate Member affiliations include the Illuminating Engineering Society, the American Hospital Association, the Society of Motion Picture Engineers, and the Library Group which consists of the American Library Association and the Special Libraries Association.

New Company Members which have joined the ASA since the first of the year are E. I. duPont de Nemours & Company, the Electric Bond and Share Company, The Foxboro Company, Gilbert and Barker Manufacturing Company, the Texas Cities Gas Company, the Wright Aeronautical Corporation, the Fellows Gear Shaper Company, and the Neville Company.

Several important leaders in the electrical industry, members of the Board of Directors of N.E.M.A., felt that their industry would get the greatest possible benefit by increasing its group membership dues rather than depending upon additional individual company memberships among electrical manufacturers. Because N.E.M.A. serves as the Code Authority for the industry the membership of the Association has increased from slightly over 200 members to more than 600 during the last few months.

The American Petroleum Institute has been active in standards programs covering oil production and refining for a number of years. Dr. R. P. Anderson will serve the A.P.I. as representative on the Standards Council, and C. A. Young will serve as alternate.

As a result of the taking over of the building and plumbing code work, heretofore conducted by the National Bureau of Standards, the National Association of Master Plumbers of the United States voted to join the ASA in order to keep in touch with the American Standard de-

velopments in this field. This vote took place at the recent convention of the Association in Washington, D. C.

The library associations' interest in American Standards was emphasized by the initiation recently of a project to standardize, for reference purposes, the data published in periodicals such as place of publication, names of those responsible for editorial and publishing policies, frequency of issue, volume and issue numbers, and page numbering. These two associations include practically all of the public, college, business, technical, and special libraries in the United States.

The American Hospital Association is already represented on the following five standardization projects under ASA auspices:

Safety Code for Walkway Surfaces (A22)
Standardization of Plumbing Equipment (A40)
Standards and Specifications for Refrigerators (B38)
Specifications and Standards for Sheets and Sheetng (L4)
Ventilation Code (Z5)

The Illuminating Engineering Society has been supporting the ASA for some years and is represented on the following projects:

Building Exits Code (A9-1929)
Code of Lighting: Factories, Mills, and Other Work Places (A11)
Code for Lighting of School Buildings (A23)
National Electrical Safety Code (C2)
Definitions of Electrical Terms (C42)
Safety Code for Automobile Headlighting
—Laboratory Tests for Approval of Electric Head-Lighting Devices for Motor Vehicles (D2-1922)
Manual on Street Traffic Signs, Signals and Markings (D5)
Scientific and Engineering Symbols and Abbreviations (Z10)

The Society of Motion Picture Engineers is proprietary sponsor for the project on Dimensional Standards for Motion Picture Apparatus and Recommended Practice (Z22-1930), and is a member of the committee on Acoustical Measurements and Terminology (Z24).

Safety Glass In Spectacles

Recently an improved safety glass for spectacles has been put on the market. The glass is of the same clear, colorless type as is used generally in the optical business. When mounted in frames this glass can not be distinguished from the usual lenses.

An objection frequently raised by parents, when spectacles of ordinary optical glass are advised for their children, is the possibility of breakage and the danger of broken fragments of glass entering the eye and doing it serious damage, or even destroying sight. The same danger is recognized when glasses are worn by older children and adults in their various sports as well as in work.

The advantage of such glasses will readily be appreciated for myopic children, where it is important to get them away from books and interested in outdoor life and various types of sport.

The slight extra expense in substituting this type of glass for ordinary lenses might well be looked upon as a small insurance investment.—*William Evans Bruner, M.D., Cleveland, in The Sight-Saving Review, September, 1933.*

New Standards for India's Railways

During 1932-33 the structural branch of the Central Standards Office, London, issued complete sets of drawings for standard over-riding switches for broad and meter gauges for Indian railways. These are adapted from the American model and are designed to overcome the inherent weakness of the stock rail associated with most types of switches hitherto used in India. Complete sets of drawings for 1 in 12 and 1 in 8½ broad gauge scissors cross-overs for 17 ft and 15 ft 6 in. track centers using 90-lb rails, and 1 in 8½ diamond crossings with single and double slips for broad gauge 115-lb and 90-lb rail sections were also issued to various railways for comments and trial manufacture prior to standardization. Designs for stretcher bars were circulated for criticism and comments, and data were collated in India and abroad regarding the design of a suitable rolled steel section with fastenings

for broad gauge railroad crossing sleepers.

The design of broad gauge plate girder bridge spans was taken in hand and preliminary sketches showing novel methods of design whereby a span of nominal length may be used for a suitable length of span opening were circulated for comment. By increasing the working stress to nine tons per sq in., and an economic distribution of metal, it has been found possible to effect an average reduction of 12 per cent in the weight of such spans with corresponding reduction in the cost.

S.A.E. Is Revising Steel Specifications

General revision of S.A.E. steel specifications, now being made, marks complete modernization of one of the most valuable set of standards ever developed by the Society. Despite continued acceleration in the use of S.A.E. steel specifications in a variety of industries as well as in the automotive field itself, development of new alloys and changes in others have made general survey of the whole group desirable.

Important in the contemplated revision will be the addition of specifications on carbon series with higher manganese content, on nickel-chromium steels, and on nickel-chrome-molybdenum alloys. Special attention also is being given to some of the cast-iron specifications, particularly those relating to cast iron generally used in cylinder block constructions and electric furnace iron.

Officially started at a long session of the Iron and Steel Division of the Standards Committee in Detroit near the end of April, completion of the revisions is expected to require at least six to eight months of consistent effort.—Norman G. Shidle in the May, 1934, issue, *S.A.E. Journal*.

Better Quality Control Sought by Russian Plants

Standardization will play an increasingly important role in industrial Russia as a result of the orders issued by the government of the USSR to improve the quality of manufactured goods.

The USSR Standards Committee has undertaken to set up basic requirements to determine quality indices in order to raise and enforce quality minima of goods. Safety characteristics will play an important part in the work, according to A. Gastev, writing in *Standardization Review*, published by the USSR Standards Committee (Jan.-Feb., 1934).

New Conditions Demand Inter-Industry Standards

John A. C. Warner, secretary and general manager of the Society of Automotive Engineers, told in some detail the achievements of the Society in a series of addresses made before various sections throughout the country.

In reviewing the work of the S.A.E. Standards Committee, Mr. Warner explained the relationship of the American Standards Association to the S.A.E. He said in part:

"The present day automotive designer, with the *S.A.E. Handbook* at his fingertips, can scarcely visualize the difficulties faced by earlier designers in the years before standards were set up. Now, the engineer who designs a crankshaft, for example, can take care of the metallurgical requirements of the design merely by writing on the blue print the proper S.A.E. specification numbers. A few minutes of 'research' in the Handbook will supply the information, including manufacturers who will make the steel and the shaft to meet the requirements of the S.A.E. Standards.

"Look back 20 years. The intrepid engineer who set out to get a satisfactory crankshaft had to go into conference with metallurgists, work out in detail a specification which seemed to meet the needs of the problem, and get a lot of samples so that an intricate series of tests could be made to determine whether the design was satisfactory. The present steel standards have saved time and money for engineers, and they are being revised constantly to meet changing conditions.

Standardization Saves Millions

"A prominent official of one of our greatest companies recently spoke of the work of the S.A.E. in standardization and research as having 'saved the manufacturers, and the public alike, millions of dollars.' He went on to say: 'It has guaranteed the integrity of our purchases. It has set up standards and bench marks of great value to the engineer who was formerly at the mercy of secret brands and unknown chemical and physical characteristics. It is a cooperative undertaking of which we all may be proud.'

"New conditions, brought about by mass production, lessened the need for new detail stand-

ards for the interchangeability of parts and emphasized as the standards of greatest value those of a more fundamental character which apply commonly to all industries rather than to one specialized industry.

"Standardization on a national basis, in which the Society is cooperating fully, is being carried forward under the procedure of the American Standards Association and with the cooperation of Governmental agencies. Of the several hundred projects moving forward under the American Standards Association, your Society is taking an active part in all of those that have any important relation to the automotive and directly associated industries, the Society being a direct sponsor for many of the more important of these projects.

"Automotive interests are protected by the fact that all of these projects, prior to final adoption, must be acted upon and approved by the Society before becoming American Standards. The S.A.E. maintains its own individual standardization activities, however, for all projects that relate only or primarily to the automotive industries.

"The Society has for many years maintained international contacts both directly and through the American Standards Association, with many international projects and has been instrumental in consummating international agreements. Possibly the outstanding examples of the Society's work in the international field are the unification of ball-bearing standards and, more lately, participation in the international unification of tire and rim standards in cooperation with the Tire and Rim Association."

Conference Held on Horizontal Fireboxes

The simplification of steel horizontal firebox boilers was the subject of a general conference called by the Division of Simplified Practice of the National Bureau of Standards for Tuesday, June 5, Cleveland, Ohio. The proposed recommendation covering this type of boilers, prepared by the Simplified Practice Committee of the industry, was under consideration.

Future Trading In Canned Goods

The first attempt at an organized market in the canned goods trade was made at Philadelphia recently with the opening of the canned foods division of the Commercial Exchange of Philadelphia.

Trading was started in canned tomatoes, peas, corn, and green beans futures for any month of the year. All the machinery of an organized commodity exchange has been set up, with provisions for grading, sampling, warehousing, and methods of making delivery on contracts. Officials of the exchange hope to see the exchange stabilize trading in canned goods.

It is hoped a futures market will make possible continuous and accurate quotations available to the public and bring about a leveling of prices through the year by discounting the effects of crop and weather changes. Three grades are recognized in the trading in the four commodities: U. S. Government Grade C (standard) is basis grade; U. S. Grade B (extra standard) is optional delivery, but no premium is allowed for this grade; and U. S. Grade A (fancy) deliverable at a premium above price at which transaction was effected.—*Philadelphia Financial Journal*, April, 1934.

Ask ASA Library For Publications

New publications on standards and simplified practice may be purchased or borrowed from the Library of the American Standards Association, 29 West 39th Street, New York.

The library has on file more than 12,000 American and foreign standards.

Members of the ASA have the privilege of calling upon the Library for research assistance in connection with standards and standardization.

STANDARD CATALOG. *Metal Cutting Tool Institute.* Available for loan from ASA.

This complete collection of standards adopted by the Metal Cutting Tool Institute may be borrowed from the ASA Library. Tools covered by the standards include drills, gear hobs, milling cutters, reamers, taps and dies.

ELECTRICAL MEASUREMENTS. *The American Society of Mechanical Engineers.* 29 West 39 Street, New York. \$1.25.

This 60-page pamphlet giving information on electrical measuring instruments and testing apparatus and their uses in testing mechanical and electrical equipment is Part 6 of the section on Instruments and Apparatus of the A.S.M.E. Power Test Codes Series. Subjects covered include voltage, current, power, energy, resistance, fre-

quency, and power factor measurements; instrument transformers; load rheostats; input of motors and output of generators; and carrying capacity of rubber-covered wires and cables.

PUBLICATIONS RELATING TO TEXTILES. *National Bureau of Standards, Washington, D. C.* No charge while supply lasts.

The National Bureau of Standards has compiled a list of all papers relating to textiles published in non-governmental as well as in governmental publications, which have been written by, or in collaboration with, members of the Bureau staff. Author and subject indices are given. Some of the more important papers are abstracted briefly. Information as to where the papers may be obtained is included.

VALUABLE DATA FOR BUYERS—ELECTRICAL. *Pacific Purchaser, May, 1934.* *Purchasing Agents' Association of Northern California, Inc., 433 California Street, San Francisco, Calif.* 20 cents.

The most recent symposium published in the Valuable Data for Buyers section of the *Pacific Purchaser* is that on Electrical Equipment. Some of the subjects covered include air conditioning, selection of alternating current motors, vacuum tubes, high-speed photography, electrical codes, and excessive power costs.

PROCEEDINGS OF COMMITTEES ON THE STANDARDIZATION OF OIL FIELD EQUIPMENT. *American Petroleum Institute, Division of Production, Dallas, Texas.* Available for loan from ASA office.

In addition to the reports of its standardization committees presented at the Fourteenth Annual A.P.I. meeting, the book includes an article by J. Edgar Pew of the Sun Oil Company on "Complying with A.P.I. Specifications." Complete reports of the following standardization committees are given: Central Committee on Standardization, Belting Committee, Boiler Committee, Derrick Committee, Pipe Committee, Pumping Equipment Committee, and Tank Committee.

THE OFFICIAL CLASSIFICATION OF MARBLES, published by the Wholesale Marble Dealers Credit Association, has been offered by the Association to the National Bureau of Standards as a basis for the establishment of a commercial standard for the grading of marble. The request for the standard was made to the Bureau of Standards by the Association.

In addition to the Wholesale Marble Dealers Credit Association, the Marble Industry Employers Association of New York and Vicinity, the National Association of Marble Dealers, and the National Association of Marble Producers have an interest in the project.

It is expected that the project will cover definitions of various grades of marble, based on physical condition, flaws or defects, working qualities, and certification and labeling of marble.

Copies of the *Official Classification of Marbles* are available from the ASA Library.

STANDARDIZATION OF CONSUMERS' GOODS. By Jessie V. Coles, New York. Ronald Press, 1932. \$3.00.

American writers have tended to neglect that section of the field of economic thought known as "Consumption". Miss Jessie V. Coles makes an important contribution in her discussion of the general problems faced by consumers living in a competitive society, and the use of standards as an aid in the selection of consumers' goods.

The inability of the consumer to judge the qualities of goods, either before or after purchase, is discussed in Part I, "The Position of the Consumer Buyer," as are the results of such inability in a society based on competition. The methods commonly used by consumers for ascertaining the quality of goods—such as inspection, home testing, experience, selection of reputable dealers, use of trade marks and labels—are analyzed.

The second and third parts are given over to a study of the nature of standards and standardization and the processes by which standards are introduced and made effective. Dr. Coles gives the impression very definitely that she would expect a considerable improvement in consumer buying if proper standards were brought into use.

The final section of the book deals with "The Present Status of Standardization." This section shows evidence of patient and thorough research, and maintains the high level of scholarship which characterizes the earlier sections. A fund of reference material is here brought together which should be of considerable use to those interested in any phase of standardization work.

To the extent that different consumers care for different qualities in the same goods, or give differing amounts of weight to the importance of the same qualities, standards cannot be given universal applicability. If, in addition, the qualities on which the consumer will insist at one price level differ from those which are necessary at another price level, as is often the case, standards which are useful at one time may be less useful or useless at another time. Under such circumstances it is almost beside the point to talk of "the one best good for a particular purpose." Almost without exception consumers' goods have no one purpose, and the relative importance of the different purposes varies among individuals and from time to time, Dr. Coles suggests. Her book should do much to stimulate and guide the introduction of standards.

British Publish New Chemical Standards

New British Standard Specifications covering phenol and the whole range of the more generally used cresylic and carbolic acids have been published by the British Standards Institution. The specifications were prepared by the Chemical Divisional Council of the Institution.

The Association of British Chemical Manufacturers, the Association of Tar Distillers, the British Disinfectant Manufacturer's Association, and the Standardization of Tar Products Tests Committee were represented on the committee which prepared the specifications.

Please Deduct Your Discount

The ASA Library requests that Members of the American Standards Association deduct the 20 per cent discount to which they are entitled when they pay for American Standards purchased from the ASA office. Considerable expense and trouble results when the discount has to be refunded.

The following publications are available through the American Standards Association Library at 75 cents each, or copies may be borrowed:

Cresylic Acid (50/55 per cent Metacresol)
Refined Cresylic Acids, Grades A and B
Cresylic Acid of High Orthocresol Content
Crude Carbolic Acids, 60's and 45's
Distilled Carbolic Acids, 60's and 45's

Russia Joins International Petroleum Standards Work

The Russian national standardizing body is now prepared to participate actively in the work of ISA Technical Committee 28 on Nomenclature and Methods of Test for Petroleum Products and Lubricants.

This project, for which the secretariat is held by the ASA, was authorized in 1930 and the first meeting was held in London, July, 1933, in connection with the World Petroleum Congress. The national standardizing bodies of the following countries are now actively participating in the work of this international committee: Austria, Belgium, Czechoslovakia, Denmark, France, Germany, Holland, Italy, Japan, Poland, Sweden, Switzerland, Russia, and the United States. To represent British petroleum interests the Institution of Petroleum Technologists is also cooperating on this project.

Fellows Gear Shaper Becomes ASA Member

Company Membership in the American Standards Association has just been taken by the Fellows Gear Shaper Company, Springfield, Vermont. The company manufactures gear shapers, milling cutters, gear measuring machines, gear lapping machines, and gear recorders.

Underwriters Warn Against Use of No. 4 Oil in Homes

Underwriters' Laboratories, Chicago, recently notified oil burner manufacturers that operation of domestic burners on No. 4 fuel oil is at present unreliable and sometimes unsafe. The text of the bulletin follows:

"Records of field service show that, in general, performance of those domestic oil burners which have been listed as suitable for use with oil fuel not heavier than No. 4 is unreliable and, in some cases, unsafe when the fuel is of a grade having characteristics conforming to the upper limits of the specifications for No. 4 oil prescribed by the Commercial Standard CS 12-33. Analysis of numerous samples of oil being supplied commercially in various parts of the country as No. 4 oil has shown that practically all such oils have characteristics slightly above those permitted for No. 3 oil in the specifications of the Commercial Standard, or, in other words, they are practically all a very good grade of No. 4 oil. The service records of domestic oil burners listed as suitable for No. 4 oil indicates that the performance of such burners is safe and reliable when these good grades of No. 4 fuel oil now being generally supplied are used.

"There is under consideration a revision of the Commercial Standard specifications for No. 3 fuel oil which, if adopted, will classify the lighter grades of No. 4 fuel oil as No. 3. Until such revision has been accomplished, we propose, as an interim measure, to modify the present listing of those domestic oil burners now listed for use of No. 4 oil by revising the classification of the fuel recommended to read as follows:

'Fuel: Not heavier than No. 3; also 4, oil having a viscosity of not more than 70 sec. (Saybolt Universal at 100 F.)'

"In some territories a few of the companies have placed a great deal of stress on the use of No. 4 fuel oil. From the above it will be noted that the Underwriters' Laboratories have found it unsafe for these burners to burn all grades of No. 4 fuel oil as it comes within the limits of the present Commercial Standard specifications."—*Oil Heat*, March, 1934.

Classification of Lubricants Is Discussed at Conference

A general conference was held on April 19, to consider a proposal by the American Society of Mechanical Engineers to develop a standard method of classification of lubricants for industrial use, based upon viscosity numbers. Repre-

sentatives of 15 national organizations were in attendance. After careful consideration of the various aspects of the problem, the conference decided that it would be undesirable at the present time to authorize a project along the lines proposed.

Further consideration of this complicated problem brought out that it was the opinion of the conference that the classification of lubricants by viscosity cannot be dissociated from the consideration of other properties of lubricants and should therefore be taken up in connection with the preparation of specifications for lubricants.

Foreign Standards For Sale by ASA

Use Serial Number when ordering any of the Foreign Standards listed below. Address a postal card or letter, with name of person to receive the pamphlets, to:

American Standards Association,
29 West 39th Street,
New York.

Standards are printed in language of the country under which they are listed.

<i>Serial Number</i>	<i>Great Britain</i>
536. Fusion welded steel air receivers (not intended for transport)	536.
537. Insulating oils for electrical purposes (excluding cables)	537.
538. Metal-sheathed paper-insulated plain annealed copper conductors for electricity supply, including voltage tests	538.
539. Performance of ceiling-type electric fans (medium-speed propeller type)	539.

Germany

540. Cotton or silk covering for round resistance wire	540.
541. Electric railways, hook bolts for fastening wires and cables in anchor terminals as shown on DIN VDE 3149	541.
542. Electric railways, involute gears for street railway motors	542.
543. Electric railways, locking clamps for anchoring wires and cables	543.
544. Electric railways, two-bolt clamp connectors, overhead lines	544.

Serial
Number

545. Electric railways, uni-polar clutch brake for street and light railways, details of binding post (or socket)

546. Electric railways, uni-polar clutch brake for street and light railways, details of blank or dead-end terminal

547. Electric railways, uni-polar clutch brake for street and light railways, details of cable terminal

548. Electric railways, uni-polar clutch brake for street and light railways, details of claw terminal

549. Electric railways, uni-polar clutch brake for street and light railways, details of insulating washers

550. Instructions for assembling splicing boxes up to 10 kv capacity

551. Instructions for assembling three-conductor insulated cable terminals (pot head)

552. Nominal and limiting resistance values of round resistance wire

553. Porcelain bushing for cable terminals, according to DIN VDE 7690

554. Set screw connector for round copper cable, 6 to 1000 sq mm

555. Set screw connector (three-way junction) for round copper cable, 6 to 1000 sq mm area

556. Technical purchase specifications for round resistance wires

557. Terminal connectors for round copper cable, 6 to 400 sq mm area

Canada

558. Established list of binder head screws

Holland

559. Aluminum cement definitions and testing requirements

560. Blast furnace cement, definitions and testing requirements

561. Iron Portland cement, definitions and testing requirements

562. Portland cement, definitions and testing requirements

563. Ball bearings, single thrust bearings

564. Flanged tie for bib tap

565. Fundamental units of measurement

566. Marks for the correction of printers' proof

567. Pipe conduit and accessories, cast-iron socket pipes for pressure-gauge I-10, for gas and water mains

568. Pipe conduit and accessories, for seamless

smooth iron pipes for steam and feed water conduits for sea-going vessels

569. Rolled brass and bronze flanges for copper pipes, for pressure gauge I-6, II-13

570. Rolled brass and bronze flanges for copper pipes, for pressure gauges, I-10, II-8, and I-16, II-13

571. Shank for bib tap

572. Soldered brass and bronze flanges for copper pipes, for pressure gauge I-6, II-5

573. Soldered brass and bronze flanges for copper pipes, for pressure gauges I-10, II-8, and I-16, II-13

574. Standard sizes of paper, maximum cutting tolerances

575. Technical drawings, indication of cast-iron pipes and fittings for gas and water mains

576. Technical drawings, indications on maps of locations and earthworks

577. Watertight well glass screw guard fittings for incandescent electric lamps (4 sheets)

Great Britain

578. Cast-iron air bricks and gratings (for use in brickwork)

579. Cast-iron manhole covers and frames (light)

580. Cast-iron spigot and drain pipes

581. Cold-drawn weldless steel boiler and superheater tubes for designed steam temperatures not exceeding 850 F (454 C)

582. Ebonite for electrical purposes

583. Engineers' files and rasps (not including precision, watchmakers' needle and Lancashire pattern files)

584. Fittings for double-capped tubular lamps

585. Forms of notched bar test pieces

586. Girder bridges; Part 1, materials; Part 2, workmanship

587. Graphical symbols for general electrical purposes

588. Moulded insulating materials suitable for accessories for general electrical purposes

589. Nomenclature, definitions, and symbols for welding and cutting

590. Nomenclature of timber for aircraft purposes, including sources of supply and application

591. Precast concrete partition slabs (solid)

592. Report on metric units of volume

593. Rubber conveyor and elevator belting

594. Sampling and analysis of coke

595. Sampling of large and run-of-mine coal

596. Standard glossary of aeronautical terms

597. Steel railway sleepers for flat-bottom rails

598. Turbine oils

SAFETY

in Construction

The American Standards Association has just approved an *American Recommended Practice for Safety in the Construction Industry (A10—1934)*

This American Recommended Practice was developed to its present stage by practical men in the industry as represented in the Associated General Contractors of America. The ASA sectional committee on safety in the construction industry is now working on an expansion of this document into what will ultimately become an American Standard.

In the meantime, the present approved manual contains a large amount of useful and practical information covering safety in connection with the following subjects (which are section titles of the manual):

General	Yards	Quarry
Employment	Motor Trucks, Tractors and Teams	Road and Street Construction
First Aid	Railroad Tracks	Laying Gas Main
Excavation	Sub-Trades	Temporary Electrical Installations
Explosives	Cleaning	Electrical Equipment
Demolition	Fire Hazards and Prevention	Garages and Automobile Repair Shops
Hoists and Derricks	Structural	Respirators, Gas Masks, Hose Masks and Breathing Apparatus
Concreting	Tunnels	Loading and Handling Vehicles
Masonry	Railroad Construction	Conveyors
Equipment Upkeep	Waste Dump Tracks	Protection of the Public
Form Work	Camp Sanitation and Housing	Clothing
Handling and Storage of Material	Compressed Air	Inspection
Scaffolding	Shaft Sinking	
Shoring	Locomotive and Tractor Cranes	
Hand Tools		
Barricades		
Boilers		

The price of this Safety Code is \$2.00 per copy. It is a 296-page book, serviceably bound. ASA Company Members are allowed a 20% discount.

AMERICAN STANDARDS ASSOCIATION
29 W. 39th Street • New York, N. Y.

